Powerline Wireless Router

PRT-301W

User's Manual

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution:

To assure continued compliance.(example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm(8 inches) during normal operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE)

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8,2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

Revision

User's Manual for PLANET Powerline Wireless Router

Model: PRT-301W

Rev: 1.0 (March, 2005)

Part No. EM-PRT301W

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Chapter 1
Introduction

As the speedy network expansion, the transmitting medium is no longer restricted to physical network cables. The technologies of wireless and powerline are growing more rapidly than traditional wired networking. The PRT-301W is multiple standards compliant with IEEE 802.3/802.3u for Ethernet, IEEE 802.11b/g for wireless LAN, and HomePlug Powerline Alliance v1.0 for powerline network. It can easily accommodate to existing network, regardless of type. Furthermore, the PRT-301W can combine three different types of networks into one and enjoy the high speed of Ethernet, freedom of wireless and simplicity of powerline.

1.1 Package Contents

Make sure that you have the following items:

- PRT-301W
- Dipole Antenna
- RJ-45 cable
- Quick Installation Guide
- User's manual
- Power Adapter

Note:	If any of the above items are missing, contact your supplier as soon as possible.

1.2 System Requirements

Before installation, please check the following requirements with your equipment.

- One RJ-45 Broadband Internet connection
- One PC with an installed 10Mbps, 100Mbps, or 10/100 Mbps Ethernet card
- TCP/IP network protocol for each PC
- UTP network cable with RJ-45 connector
- Microsoft Internet Explorer 4.0 or later, or Netscape Navigator 4.0 or later. (5.0 and 4.7, respectively, are strongly recommended.)

1.3 Features

- Internet connection sharing for every node with one external IP
- Support Homeplug Powerline Alliance v1.0
- Support 802.11g wireless LAN, and 802.3/802.3u 10M/100M Ethernet
- Three 10/100Mbps Auto-negotiation and Auto-MDIX switching ports for flexibility network connectivity
- 64-bit, 128-bit WEP (Wired Equivalent Privacy)
- Web Configuration provide a user friendly interface for the user to configure through web browser
- Support DHCP server and client
- Support MAC Filter

1.4 Specification

Hardware	
Port	Four 10/100Base-TX ports (WAN * 1, LAN * 3) One powerline port
LED Indicators	System: 1 LEDs; PWR Powerline: 2 LEDs; LNK, ACT Wireless: 1 LED; WLAN LAN: 3 LEDs; LNK/ACT WAN: 1 LED; WAN
Antenna	One Dipole Antenna
Wireless LAN	
Standard	IEEE 802.11g
Signal Type	DSSS (Direct Sequence Spread Spectrum)
Modulation	QPSK / BPSK / CCK/OFDM
Output Power	15dBm
Data Encryption	64 bit / 128 bit WEP encryption
Frequency	2.4GHz - 2.484GHz
Channel	11 Channels (FCC / US, Canada) 13 Channels (ETSI / Europe) 14 Channels (TELEC / Japan)
Data Rate	802.11b: 1 / 2 / 5.5 / 11 Mbps 802.11g: 6 / 9 / 12 / 18 / 24 / 36 / 48 / 54 Mbps
Internet Connectivity	
Internet Connection	Fixed IP, PPPoE, PPTP, Dynamic IP
Protocol	TCP/IP, NAT, DHCP, HTTP, RIPv1/v2
Advanced Function	Virtual Server, DMZ
Powerline	
Standard	HomePlug Powerline Alliance v1.0
Data Rate	Up to 14Mbps over powerline

1.5 Wireless Performance

The following information will help you utilizing the wireless performance, and operating coverage of PRT-301W.

1. Site selection

To avoid interferences, please locate PRT-301W and wireless clients away from transformers, microwave ovens, heavy-duty motors, refrigerators, fluorescent lights, and other industrial equipments. Keep the number of walls, or ceilings between AP and clients as

few as possible; otherwise the signal strength may be seriously reduced. Place PRT-301W in open space to improve the coverage.

2. Environmental factors

The wireless network is easily affected by many environmental factors. Every environment is unique with different obstacles, construction materials, weather, etc. It is hard to determine the exact operating range of PRT-301W in a specific location without testing.

3. Antenna adjustment

The bundled antenna of PRT-301W is adjustable. Firstly install the antenna pointing straight up, then smoothly adjust it if the radio signal strength is poor. But the signal reception is definitely weak in some certain areas, such as location right down the antenna.

Moreover, the original antenna of PRT-301W can be replaced with other external antennas to extend the coverage. Please check the specification of the antenna you want to use, and make sure it can be used on PRT-301W.

4. WLAN type

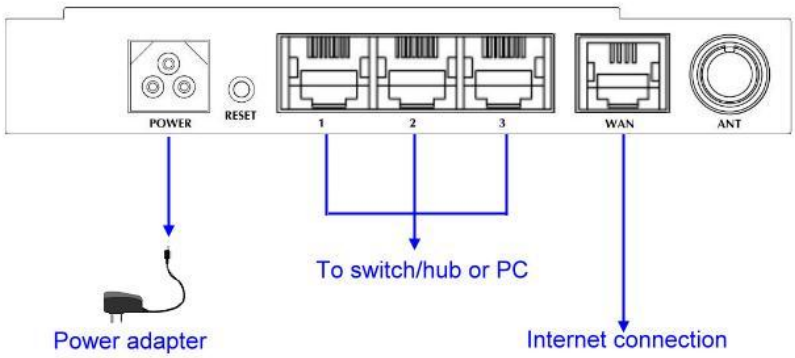
If PRT-301W is installed in an 802.11b and 802.11g mixed WLAN, its performance will reduced significantly. Because every 802.11g OFDM packet needs to be preceded by an RTS-CTS or CTS packet exchange that can be recognized by legacy 802.11b devices. This additional overhead lowers the speed. If there are no 802.11b devices connected, or if connections to all 802.11b devices are denied so that PRT-301W can operate in 11g-only mode, then its data rate should actually 54Mbps.

Chapter 2

Hardware Installation

2.1 Hardware Connection

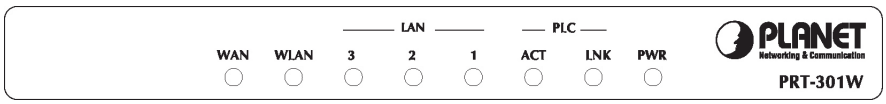
Before you proceed with the installation, it is necessary that you have enough information about the PRT-301W.



1. **Locate an optimum location for the PRT-301W.** The best place for your PRT-301W is usually at the center of your wireless network, with line of sight to all of your mobile stations.
2. **Assemble the antenna to PRT-301W.** Try to place them to a position that can best cover your wireless network. The antenna's position will enhance the receiving sensitivity.
3. **Connect RJ-45 cable to PRT-301W LAN port.** Connect one of the LAN ports on PRT-301W to your LAN switch/hub with a RJ-45 cable.
4. **Connect RJ-45 cable to PRT-301W WAN port.** Connect ADSL/Cable Modem to the WAN port on PRT-301W. Use the cable supplied with your modem. If no cable was supplied with your modem, please use a RJ-45 Ethernet cable.
5. **Plug in power adapter and connect to power source**. After power on, PRT-301W will start to operate. In the mean time, PRT-301W is connected to the powerline network.

Note:	ONLY use the power adapter supplied with the PRT-301W. Otherwise, the product may be damaged.

2.2 LED Indicators



PWR		Router with proper power connection.
PLC	**LNK**	The LNK LED illuminates when a successful connection is made between the PRT-301W and another powerline device or network.
	ACT	The ACT LED is flashing when the PRT-301W is actively sending or receiving data over the powerline network.
LAN (1-3)		The LAN LEDs serve two purposes. If the LED continuously illuminated, the PRT-301W is successfully connected to a device through the corr e-

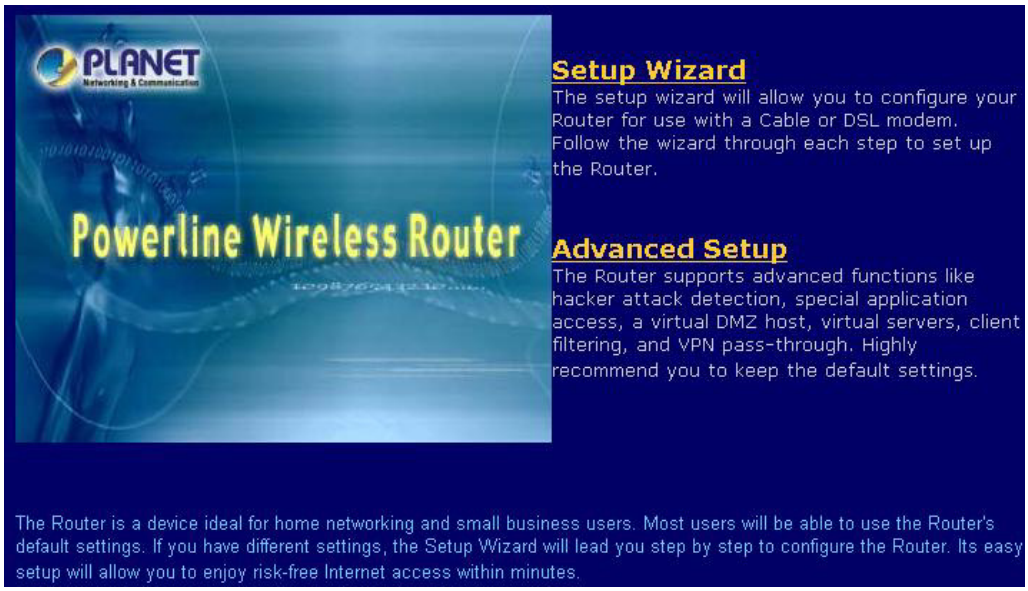
	sponding port (1, 2 or 3). If the LED is flashing, the PRT-301W is actively sending or receiving data over that port.
WLAN	The WLAN LED flashes when the wireless works.
WAN	The WAN illuminates when the PRT-301W is powered on and flashes when the PRT-301W is actively sending or receiving data over the WAN network.

Chapter 3
Initial Setup

3.1 Overview

Web configuration provides a user-friendly graphical user interface (web pages) to manage your PRT-301W. A PRT-301W with an assigned IP address allows you to monitor and configure via web browser easily.

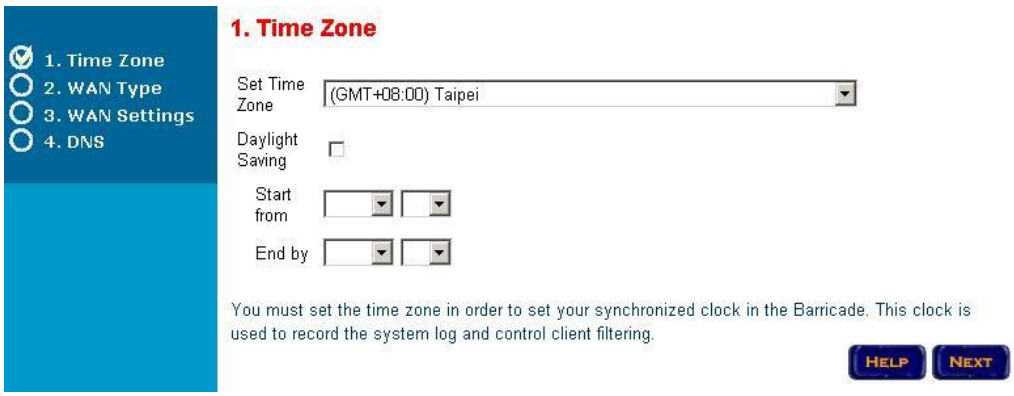
1. Open your web browser.
2. Enter the IP address of your PRT-301W in the address field (the default IP address is 192.168.1.1).
3. The homepage of PRT-301W appears as below.


PLANET
Networking & Communication
Powerline Wireless Router
Setup Wizard
The setup wizard will allow you to configure your Router for use with a Cable or DSL modem. Follow the wizard through each step to set up the Router.
Advanced Setup
The Router supports advanced functions like hacker attack detection, special application access, a virtual DMZ host, virtual servers, client filtering, and VPN pass-through. Highly recommend you to keep the default settings.
The Router is a device ideal for home networking and small business users. Most users will be able to use the Router's default settings. If you have different settings, the Setup Wizard will lead you step by step to configure the Router. Its easy setup will allow you to enjoy risk-free Internet access within minutes.

3.2 Setup Wizard

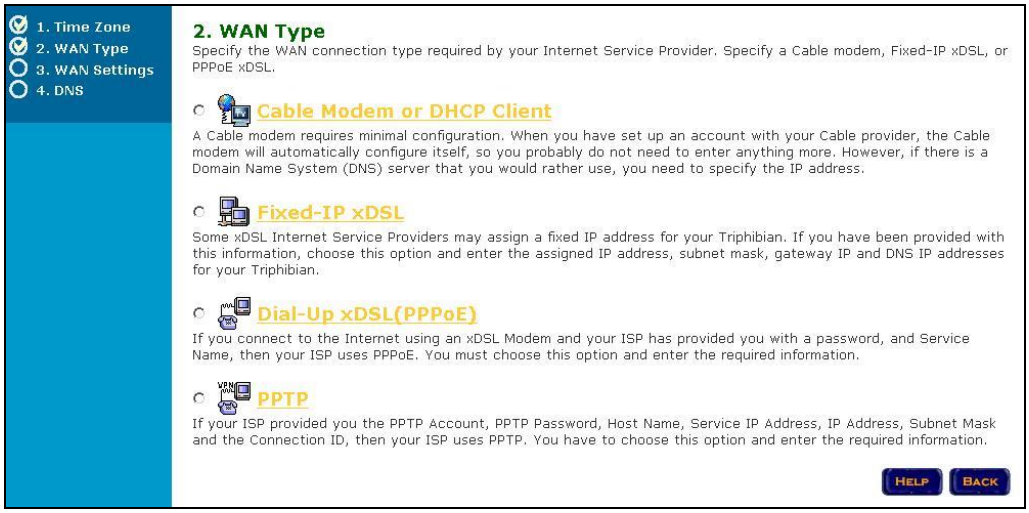
The Setup Wizard allows you to complete the initial configurations of PRT-301W with step-by-step instructions.

Step 1: Time Zone


1. Time Zone
2. WAN Type
3. WAN Settings
4. DNS
1. Time Zone
Set Time Zone
(GMT+08:00) Taipei
Daylight Saving
Start from
End by
You must set the time zone in order to set your synchronized clock in the Barricade. This clock is used to record the system log and control client filtering.
HELP
NEXT

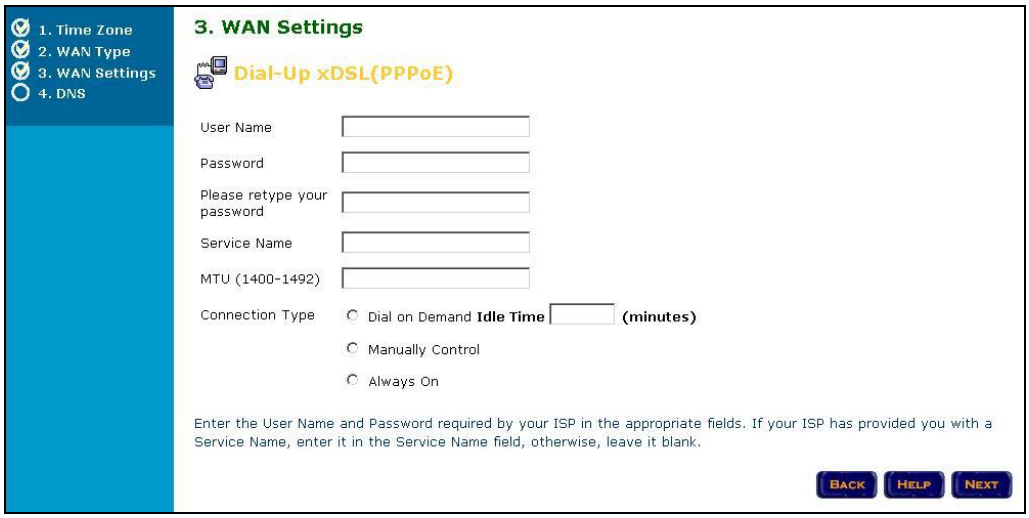
Select your time zone from the drop-down list. If necessary, enable the "Daylight Saving" option and configure the start and end time below. Click "NEXT" to continue.

Step 2: WAN Type


1. Time Zone
2. WAN Type
3. WAN Settings
4. DNS
2. WAN Type
Specify the WAN connection type required by your Internet Service Provider. Specify a Cable modem, Fixed-IP xDSL, or PPPoE xDSL.
Cable Modem or DHCP Client
A Cable modem requires minimal configuration. When you have set up an account with your Cable provider, the Cable modem will automatically configure itself, so you probably do not need to enter anything more. However, if there is a Domain Name System (DNS) server that you would rather use, you need to specify the IP address.
Fixed-IP xDSL
Some xDSL Internet Service Providers may assign a fixed IP address for your Triphibian. If you have been provided with this information, choose this option and enter the assigned IP address, subnet mask, gateway IP and DNS IP addresses for your Triphibian.
Dial-Up xDSL(PPPoE)
If you connect to the Internet using an xDSL Modem and your ISP has provided you with a password, and Service Name, then your ISP uses PPPoE. You must choose this option and enter the required information.
PPTP
If your ISP provided you the PPTP Account, PPTP Password, Host Name, Service IP Address, IP Address, Subnet Mask and the Connection ID, then your ISP uses PPTP. You have to choose this option and enter the required information.
HELP
BACK

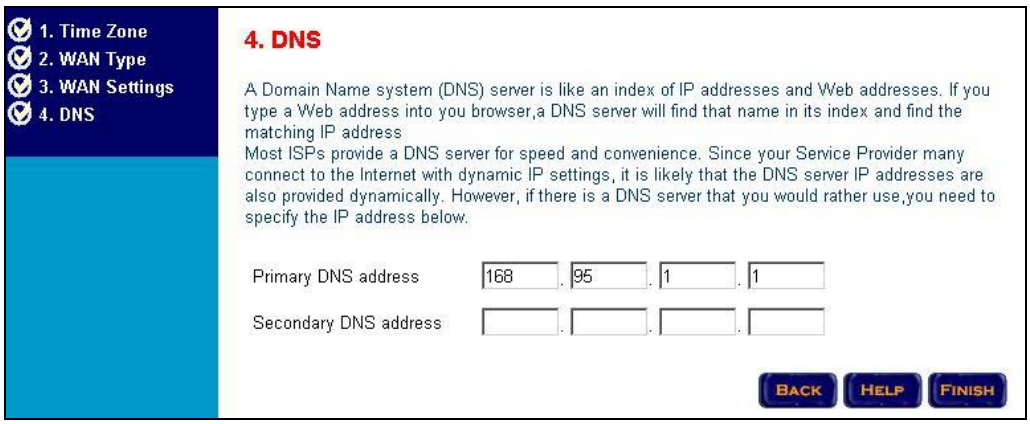
Select your Internet connection type in this page.

Step 3: WAN Settings


1. Time Zone
2. WAN Type
3. WAN Settings
4. DNS
3. WAN Settings
Dial-Up xDSL(PPPoE)
User Name
Password
Please retype your password
Service Name
MTU (1400-1492)
Connection Type
Dial on Demand Idle Time (minutes)
Manually Control
Always On
Enter the User Name and Password required by your ISP in the appropriate fields. If your ISP has provided you with a Service Name, enter it in the Service Name field, otherwise, leave it blank.
BACK
HELP
NEXT

The contents of this page are depending on which option you selected in previous page. Please obtain all necessary information from your ISP and fill the respective fields with proper settings. Click "NEXT" to continue.

Step 4: DNS


1. Time Zone
2. WAN Type
3. WAN Settings
4. DNS
4. DNS
A Domain Name system (DNS) server is like an index of IP addresses and Web addresses. If you type a Web address into you browser,a DNS server will find that name in its index and find the matching IP address
Most ISPs provide a DNS server for speed and convenience. Since your Service Provider many connect to the Internet with dynamic IP settings, it is likely that the DNS server IP addresses are also provided dynamically. However, if there is a DNS server that you would rather use,you need to specify the IP address below.
Primary DNS address
168 . 95 . 1 . 1
Secondary DNS address
BACK
HELP
FINISH

Key in the IP address of your DNS server, if any. Click “FINISH” to complete the Setup Wizard.

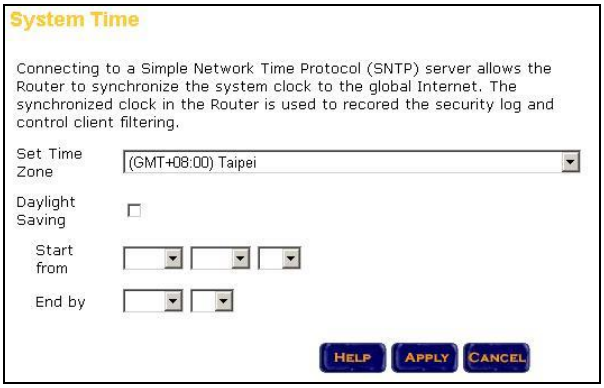
Chapter 4

Advanced Setup

4.1 System

The sub pages contained in System provide the basic configuration tools for the Router.

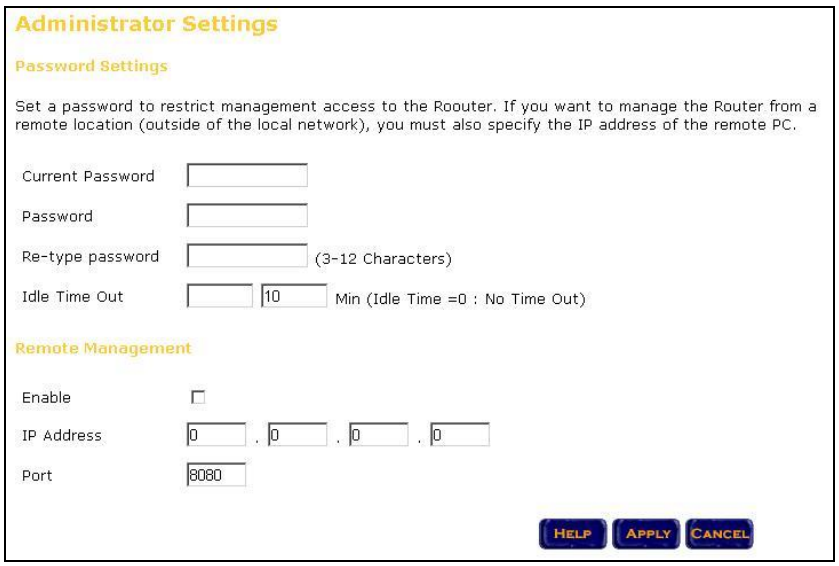
4.1.1 System Time


System Time
Connecting to a Simple Network Time Protocol (SNTP) server allows the Router to synchronize the system clock to the global Internet. The synchronized clock in the Router is used to recored the security log and control client filtering.
Set Time Zone
(GMT+08:00) Taipei
Daylight Saving
Start from
End by
HELP
APPLY
CANCEL

Set Time Zone	Select your time zone from the drop-down list.
Daylight Saving	Enable this option if necessary.
Start from	If the above option is enabled, select the start and end time here.
End by	

4.1.2 Administrator Settings

You can change the administrator password and setup remote management options here.


Administrator Settings
Password Settings
Set a password to restrict management access to the Roouter. If you want to manage the Router from a remote location (outside of the local network), you must also specify the IP address of the remote PC.
Current Password
Password
Re-type password
(3-12 Characters)
Idle Time Out
10
Min (Idle Time =0 : No Time Out)
Remote Management
Enable
IP Address
0 . 0 . 0 . 0
Port
8080
HELP
APPLY
CANCEL

Password Settings	
Current Password	Enter the password value currently used here. There is no password by default. It is recommended to change the default setting for better protection.
Password	Enter the new password value in this field.
Re-type password	Enter the new password again for confirmation.
Idle Time Out	Specify the time that will elapse before the PRT-301W times out of a connection.
Remote Management	
Enable	Select to enable Remote Management option.
IP Address	Type the IP address of the PC that can be used for remote management.
Port	Specify the remote management port number.

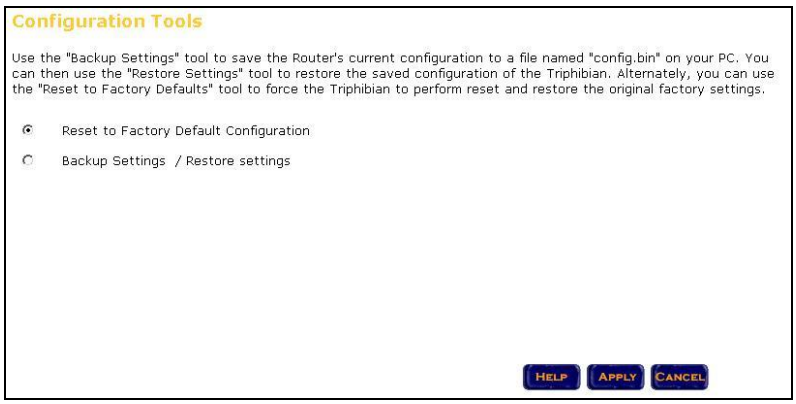
4.1.3 Firmware Upgrade

You can upgrade the PRT-301W with new firmware in this page.

Firmware Update
Enter the path and name of the upgrade file then click the APPLY button below. You will be prompted to confirm the upgrade.
Current Firmware Version: V 1.06
Firmware Date: 2005/3/21
Browse...
APPLY

1. Download the latest firmware from PLANET web site, and save it to your local disk.
2. Click “Browse…” and find out the location of the downloaded file.
3. Select the file and click “APPLY” to start the firmware upgrade.

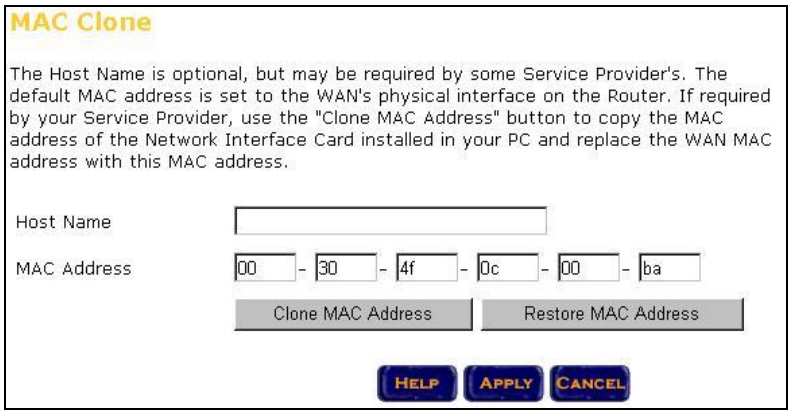
4.1.4 Configuration Tools


Configuration Tools
Use the "Backup Settings" tool to save the Router's current configuration to a file named "config.bin" on your PC. You can then use the "Restore Settings" tool to restore the saved configuration of the Triphibian. Alternately, you can use the "Reset to Factory Defaults" tool to force the Triphibian to perform reset and restore the original factory settings.
Reset to Factory Default Configuration
Backup Settings / Restore settings
HELP
APPLY
CANCEL

Reset to Factory Default Configuration	Use this option to restore your PRT-301W with factory default settings.

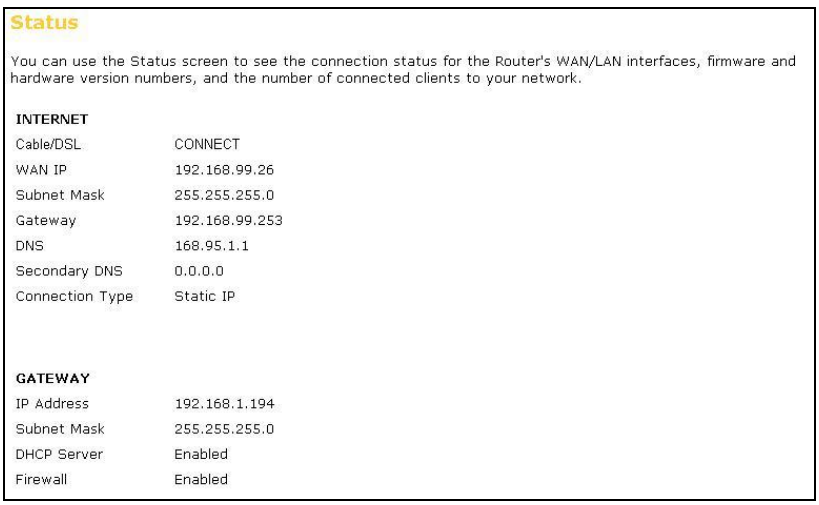
Backup Settings / Restore Settings	Use the "Backup Settings" tool to save the current configuration to a file named "config.bin" on your PC. You can then use the "Restore Settings" tool to restore the saved configuration.

4.1.5 MAC Clone


MAC Clone
The Host Name is optional, but may be required by some Service Provider's. The default MAC address is set to the WAN's physical interface on the Router. If required by your Service Provider, use the "Clone MAC Address" button to copy the MAC address of the Network Interface Card installed in your PC and replace the WAN MAC address with this MAC address.
Host Name
MAC Address
00 - 30 - 4f - 0c - 00 - ba
Clone MAC Address
Restore MAC Address
HELP
APPLY
CANCEL

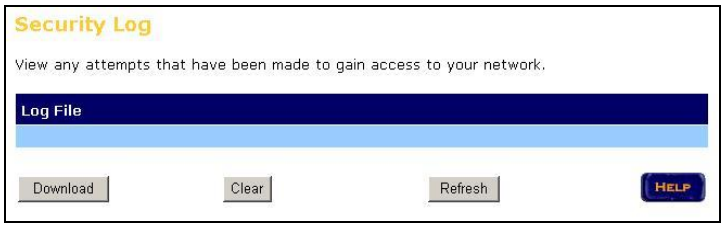
Host Name	It is an optional setting, but may be required by some Internet Service Provider.
MAC Address	By default, this field is set to the MAC address of PRT-301W's WAN port. If required by your Service Provider, you can also use the "Clone MAC Address" button to copy the MAC address of the Network Interface Card installed in your PC and replace the WAN MAC address.

4.1.6 Status


Status
You can use the Status screen to see the connection status for the Router's WAN/LAN interfaces, firmware and hardware version numbers, and the number of connected clients to your network.
INTERNET
Cable/DSL CONNECT
WAN IP 192.168.99.26
Subnet Mask 255.255.255.0
Gateway 192.168.99.253
DNS 168.95.1.1
Secondary DNS 0.0.0.0
Connection Type Static IP
GATEWAY
IP Address 192.168.1.194
Subnet Mask 255.255.255.0
DHCP Server Enabled
Firewall Enabled

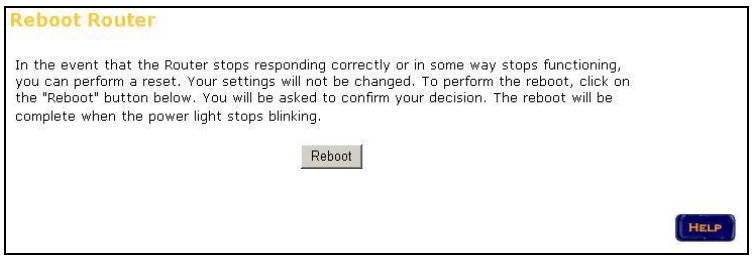
This page shows you the connection status for the PRT-301W's WAN/LAN interfaces, firmware and hardware version numbers, and the number of connected clients to your network.

4.1.7 System Log



This page displays all illegal attempts to access your network.

4.1.8 Reboot

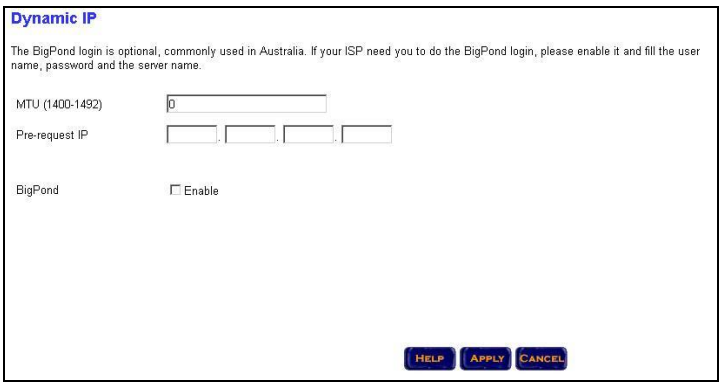

Reboot Router
In the event that the Router stops responding correctly or in some way stops functioning, you can perform a reset. Your settings will not be changed. To perform the reboot, click on the "Reboot" button below. You will be asked to confirm your decision. The reboot will be complete when the power light stops blinking.
Reboot
HELP

Click “Reboot” to restart the PRT-301W in the event the system is not working properly.

4.2 WAN

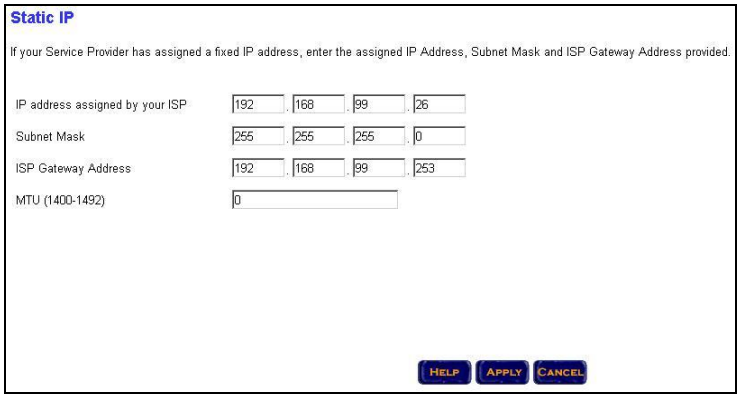
The PRT-301W supports four types of Internet connections.

4.2.1 Dynamic IP


Dynamic IP
The BigPond login is optional, commonly used in Australia. If your ISP need you to do the BigPond login, please enable it and fill the user name, password and the server name.
MTU (1400-1492)
0
Pre-request IP
BigPond
Enable
HELP
APPLY
CANCEL

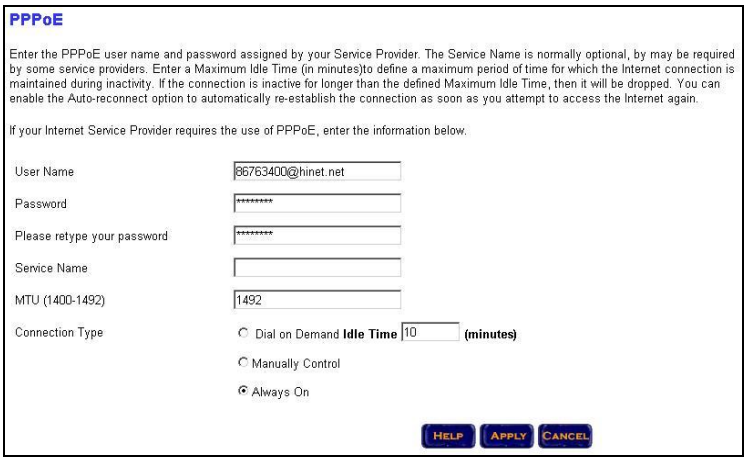
MTU (1400-1492)	Type the MTU value in the field. It is suggested to set it to 1492.
Pre-request IP	You can leave this field blank if your ISP does not provide related information.
BigPond	If your ISP need you to do the BigPond login, please enable this option and fill the username, password, and server name.

4.2.2 Static IP


Static IP
If your Service Provider has assigned a fixed IP address, enter the assigned IP Address, Subnet Mask and ISP Gateway Address provided.
IP address assigned by your ISP
192 . 168 . 99 . 26
Subnet Mask
255 . 255 . 255 . 0
ISP Gateway Address
192 . 168 . 99 . 253
MTU (1400-1492)
0
HELP
APPLY
CANCEL

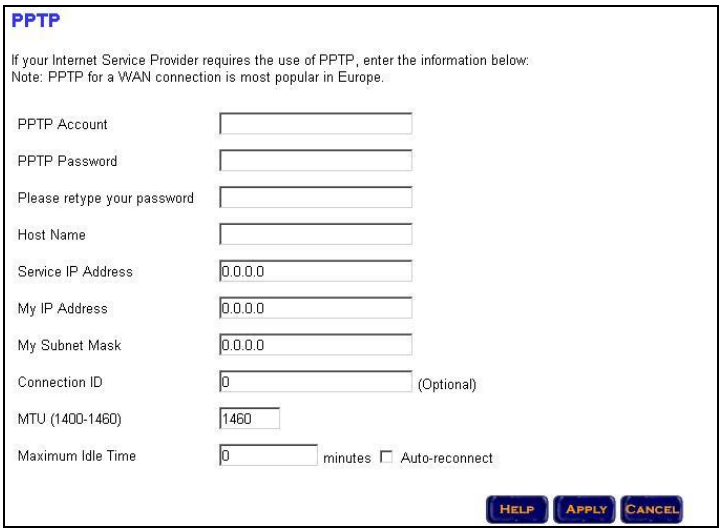
If your ISP has assigned you a fixed IP address, enter the assigned IP address, subnet mask, and Gateway address in respective field.

4.2.3 PPPoE


PPPoE
Enter the PPPoE user name and password assigned by your Service Provider. The Service Name is normally optional, by may be required by some service providers. Enter a Maximum Idle Time (in minutes)to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the defined Maximum Idle Time, then it will be dropped. You can enable the Auto-reconnect option to automatically re-establish the connection as soon as you attempt to access the Internet again.
If your Internet Service Provider requires the use of PPPoE, enter the information below.
User Name
86763400@hinet.net
Password
Please retype your password
Service Name
MTU (1400-1492)
1492
Connection Type
Dial on Demand Idle Time 10 (minutes)
Manually Control
Always On
HELP
APPLY
CANCEL

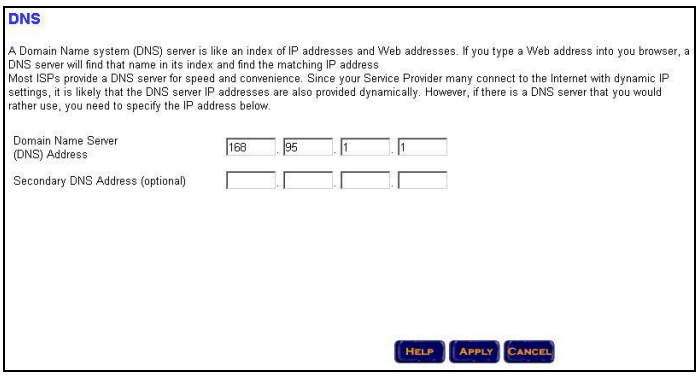
User Name	Type your PPPoE username.
Password	Type your PPPoE password.
Service Name	This field is normally optional. However, it may require by some service providers.
MTU (1400-1492)	Type the MTU value in the field. It is suggested to set it to 1492.
Connection Type	There are three options available. **Dial on Demand:** when enabled, the PRT-301W automatically connects to the Internet when the LAN PC activates web browser. The "Idle Time" field specifies the time that will elapse before PRT-301W times out a connection. **Manually Control:** manually controls the Internet connection by the buttons on the "Status" page. **Always On:** keeps an always-on Internet connection.

4.2.4 PPTP



PPTP Account	Type your PPTP account.
PPTP Password	Type your PPTP password.
Host Name	Type the host name if your ISP provides you the related information.
Service IP Address	Type the service IP address your ISP provides.
My IP Address	Type the IP address your ISP assigns to you.
My Subnet Mask	Type the subnet mask your ISP provides.
Connection ID	Type the connection ID if your ISP provides you the related information.
MTU (1400-1460)	Type the MTU value in this field. It is suggested to set it to 1460.
Maximum Idle Time	Specify the time that will elapse before PRT-301W times out a connection.
Auto-reconnect	With this option enabled, PRT-301W will try to rebuild the Internet connection once the link is down.

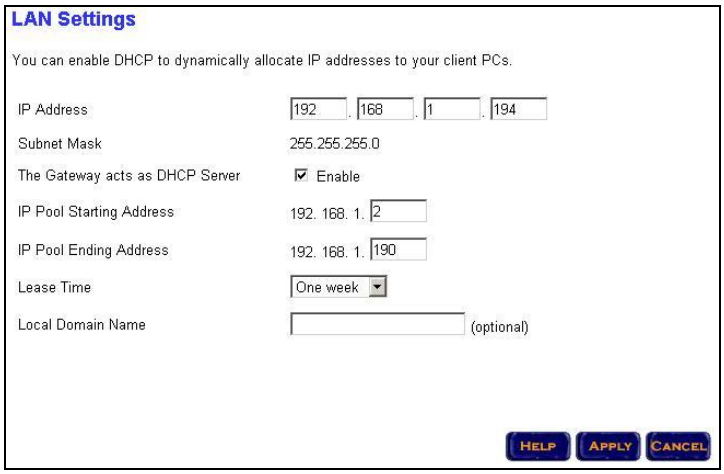
4.2.5 DNS


DNS
A Domain Name system (DNS) server is like an index of IP addresses and Web addresses. If you type a Web address into you browser, a DNS server will find that name in its index and find the matching IP address
Most ISPs provide a DNS server for speed and convenience. Since your Service Provider many connect to the Internet with dynamic IP settings, it is likely that the DNS server IP addresses are also provided dynamically. However, if there is a DNS server that you would rather use, you need to specify the IP address below.
Domain Name Server (DNS) Address
168 . 95 . 1 . 1
Secondary DNS Address (optional)
HELP
APPLY
CANCEL

DNS Address	Type the DNS address if your ISP provides you the related information.
Secondary DNS Address	Type the secondary DNS address for redundant use.

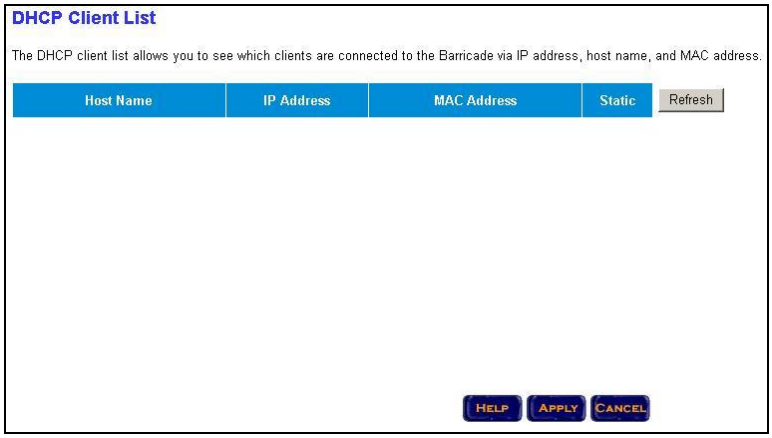
4.3 LAN

4.3.1 LAN Settings



IP Address	This is the LAN IP address of this router. The default value is 192.168.1.1.
Subnet Mask	It is fixed to 255.255.255.0
DHCP Server	Enables this option to allow the router to automatically assign IP address to the LAN clients.
Starting Address	Type the start IP address of the IP pool.
Ending Address	Type the end IP address of the IP pool.
Lease Time	Select the proper expired duration of the IP leased by PRT-301W.
Local Domain Name	Type the local domain name in this field. It is an optional field.

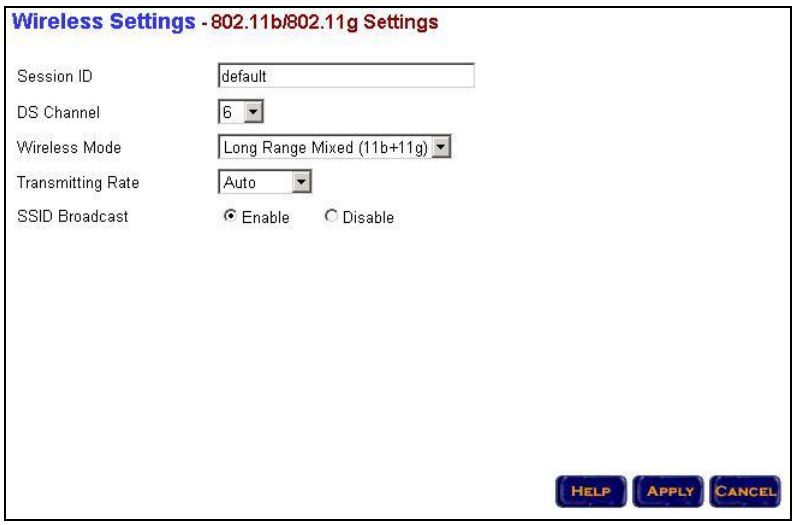
4.3.2 DHCP Client List



This page displays the profiles of the DHCP clients

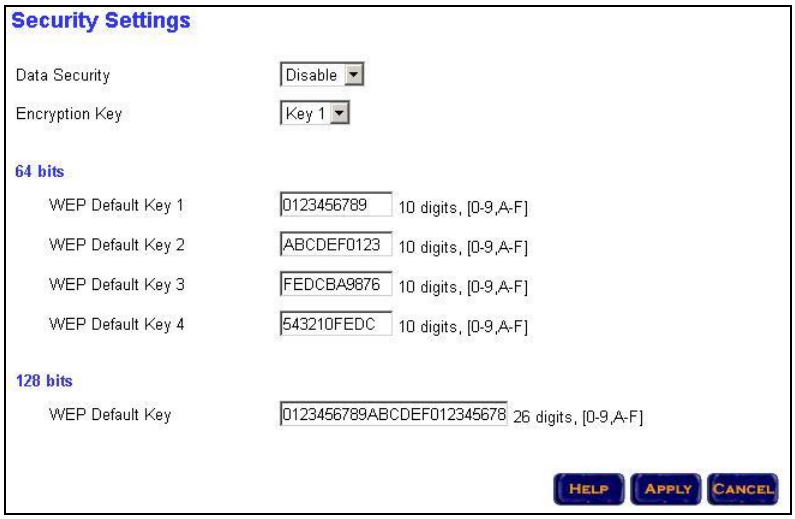
4.4 Wireless

4.4.1 Wireless Settings



Session ID	Type a SSID in this field. The SSID of any wireless client must match the SSID typed here in order for the wireless client to access the LAN and WAN via PRT-301W.
DS Channel	Select a work channel for wireless communications.
Wireless Mode	There are four options available. Select the proper mode according to your practical application.
Transmitting Rate	Select one of the wireless communication data rates. It is suggested to set it to Auto.
SSID Broadcast	Enable or Disable SSID Broadcast feature.

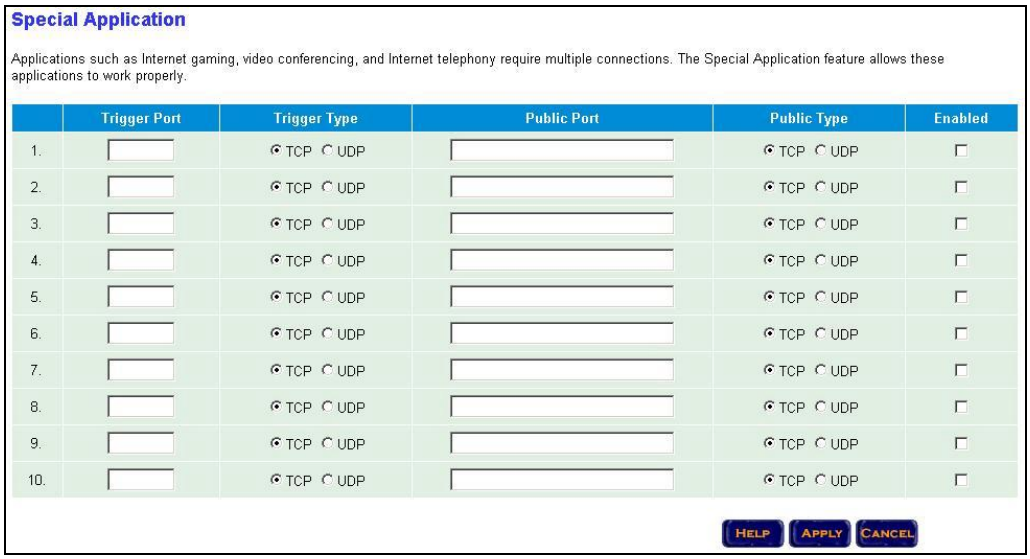
4.4.2 Security Settings



Data Security	Select the encryption from the drop-down list.
Encryption Key	If 64 bits WEP key is selected, please choose which key you prefer to use in this field.
64 bits WEP Key 1 ~4	Enter the value of each key. The key value must be 10 hexadecimal digits.
128 bits WEP Key	Enter the key value. The key value must be 26 hexadecimal digits.

4.5 NAT

4.5.1 Special Application

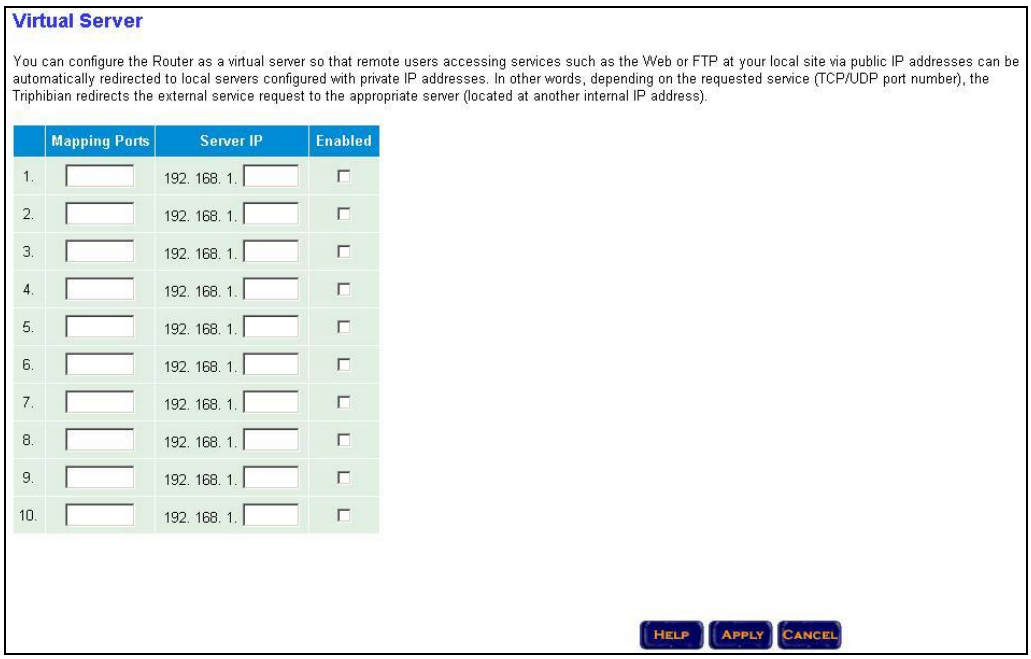


Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications cannot work when Network Address Translation (NAT) is enabled. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

For example:

ID	Trigger Port	Trigger Type	Public Port	Public Type	Comment
1	28800	UDP	2300-2400, 47624	UDP	MSN Game Zone
2	28800	UDP	2300-2400, 47624	TCP	MSN Game Zone
3	6112	UDP	6112	UDP	Battle.net

4.5.2 Virtual Server


Virtual Server
You can configure the Router as a virtual server so that remote users accessing services such as the Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. In other words, depending on the requested service (TCP/UDP port number), the Triphibian redirects the external service request to the appropriate server (located at another internal IP address).
Mapping Ports
Server IP
Enabled
1. 192. 168. 1.
2. 192. 168. 1.
3. 192. 168. 1.
4. 192. 168. 1.
5. 192. 168. 1.
6. 192. 168. 1.
7. 192. 168. 1.
8. 192. 168. 1.
9. 192. 168. 1.
10. 192. 168. 1.
HELP
APPLY
CANCEL

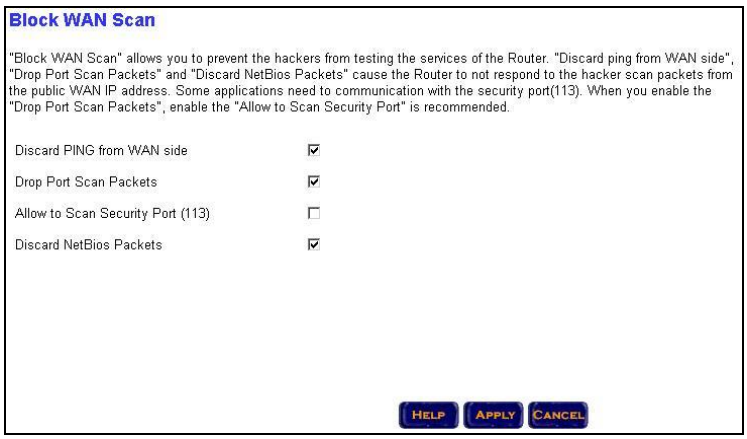
If you configure the Router as a virtual server, remote users accessing services such as Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP address. In other words, depending on the requested service (port number), the Router redirects the external service request to the appropriate server.

For example:

ID	Mapping Ports	Server IP	Enabled
1	200	192.168.2.20	☑
2	333	192.168.2.12	☐
3	455	192.168.2.28	☐

4.6 Firewall

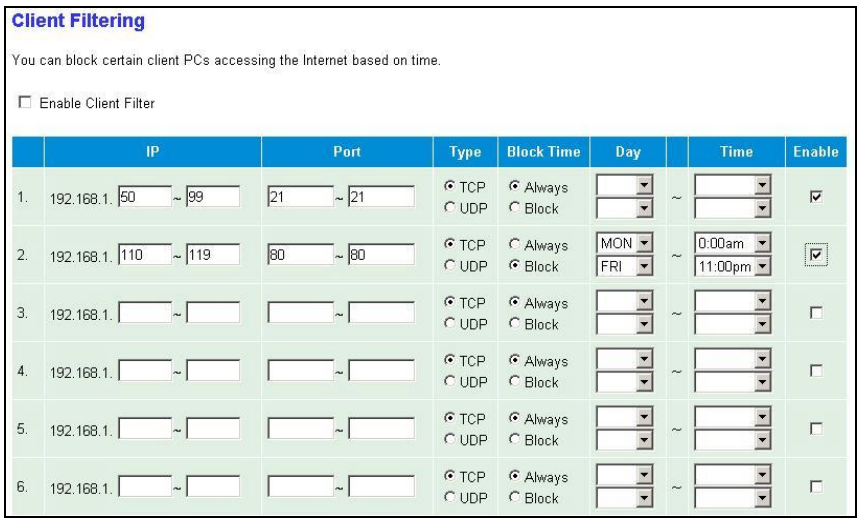
4.6.1 Block WAN Ping


Block WAN Scan
"Block WAN Scan" allows you to prevent the hackers from testing the services of the Router. "Discard ping from WAN side", "Drop Port Scan Packets" and "Discard NetBios Packets" cause the Router to not respond to the hacker scan packets from the public WAN IP address. Some applications need to communication with the security port(113). When you enable the "Drop Port Scan Packets", enable the "Allow to Scan Security Port" is recommended.
Discard PING from WAN side
Drop Port Scan Packets
Allow to Scan Security Port (113)
Discard NetBios Packets
HELP
APPLY
CANCEL

This page allows you to prevent the hackers from testing the services of the Router. "Discard ping from WAN side", "Drop Port Scan Packets" and "Discard NetBios Packets" cause the Router to not respond to the hacker scan packets from the public WAN IP address.

Some applications need to communication with the security port(113). When you enable the "Drop Port Scan Packets", enable the "Allow to Scan Security Port" is recommended.

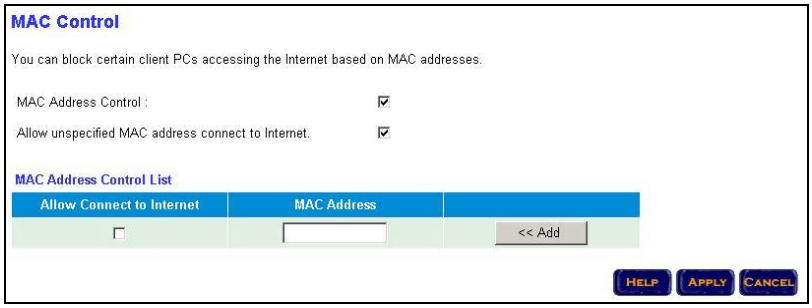
4.6.2 Client Filtering


Client Filtering
You can block certain client PCs accessing the Internet based on time.
Enable Client Filter
IP
Port
Type
Block Time
Day
Time
Enable
1. 192.168.1. 50 ~ 99 21 ~ 21 TCP UDP Always Block ~
2. 192.168.1. 110 ~ 119 80 ~ 80 TCP UDP Always Block MON FRI ~ 0:00am 11:00pm
3. 192.168.1. ~ ~
4. 192.168.1. ~ ~
5. 192.168.1. ~ ~
6. 192.168.1. ~ ~

You can filter Internet access for local clients based on IP addresses, application types, (i.e., HTTP port), and time of day.

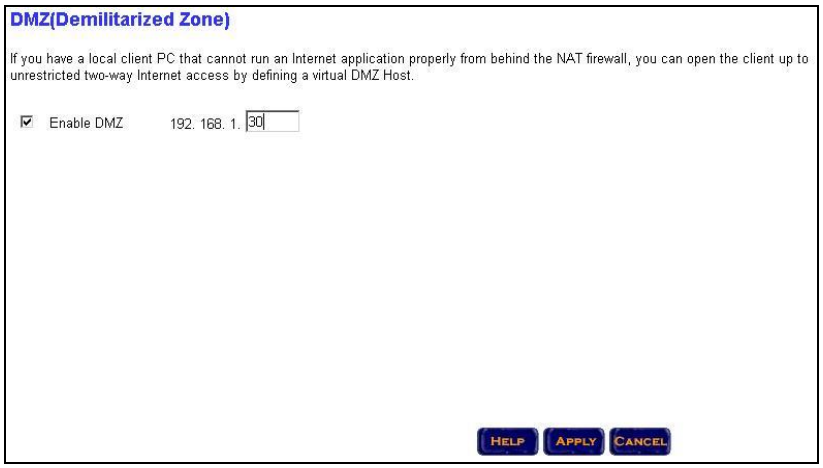
For example, this screen shows that clients in the address range 192.168.1.50-99 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.1.110-119 are blocked from browsing the Internet from Monday through Friday.

4.6.3 MAC Control



You can block certain client PCs accessing the Internet based on MAC addresses.

4.6.4 DMZ

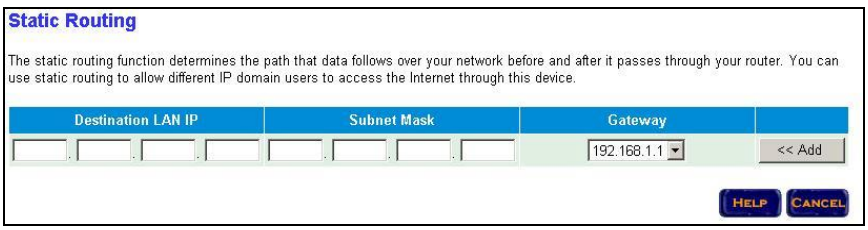

DMZ(Demilitarized Zone)
If you have a local client PC that cannot run an Internet application properly from behind the NAT firewall, you can open the client up to unrestricted two-way Internet access by defining a virtual DMZ Host.
Enable DMZ
192. 168. 1. 30
HELP
APPLY
CANCEL

If you have a client PC that cannot run Internet application properly from behind the NAT firewall or after configuring the Special Applications function, you can open the client up to unrestricted two-way Internet access.

Enter the IP address of a DMZ host to this screen. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks; so only use this option as a last resort.

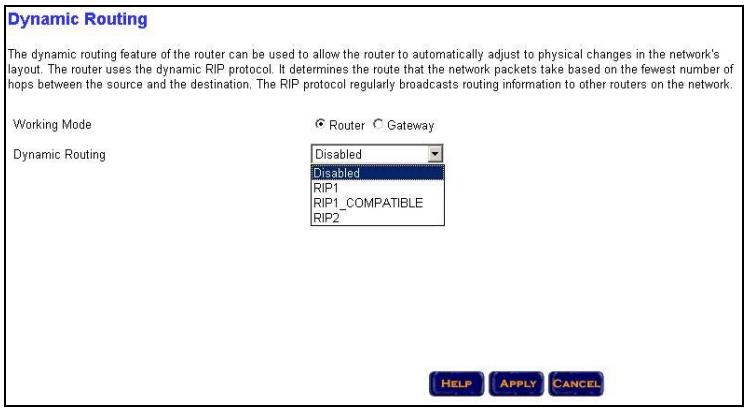
4.7 Routing

4.7.1 Static Routing


Static Routing
The static routing function determines the path that data follows over your network before and after it passes through your router. You can use static routing to allow different IP domain users to access the Internet through this device.
Destination LAN IP
Subnet Mask
Gateway
192.168.1.1
<< Add
HELP
CANCEL

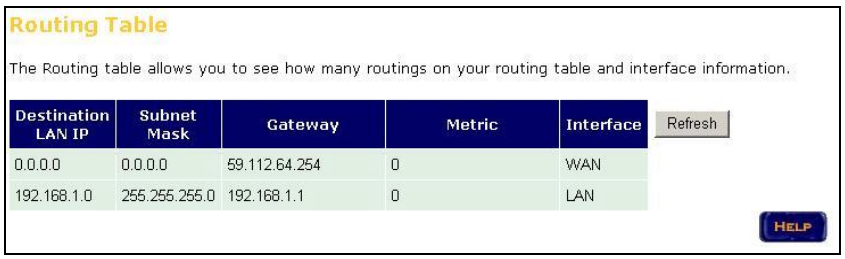
The static routing function determines the path that data follows over your network before and after it passes through your router. You can use static routing to allow different IP domain users to access the Internet through this device.

4.7.2 Dynamic Routing


Dynamic Routing
The dynamic routing feature of the router can be used to allow the router to automatically adjust to physical changes in the network's layout. The router uses the dynamic RIP protocol. It determines the route that the network packets take based on the fewest number of hops between the source and the destination. The RIP protocol regularly broadcasts routing information to other routers on the network.
Working Mode
Router
Gateway
Dynamic Routing
Disabled
Disabled
RIP1
RIP1_COMPATIBLE
RIP2
HELP
APPLY
CANCEL

The dynamic routing feature of the router can be used to automatically adjust to physical changes in the network's layout. The router uses the dynamic RIP protocol. It determines the route that the network packets take based on the fewest number of hops between the source and the destination. The RIP protocol regularly broadcasts routing information to other routers on the network.

4.7.3 Routing Table List



This page displays the information on your routing table.

Chapter 5

Powerline Network Utility

5.1 Install the Powerline Network Utility

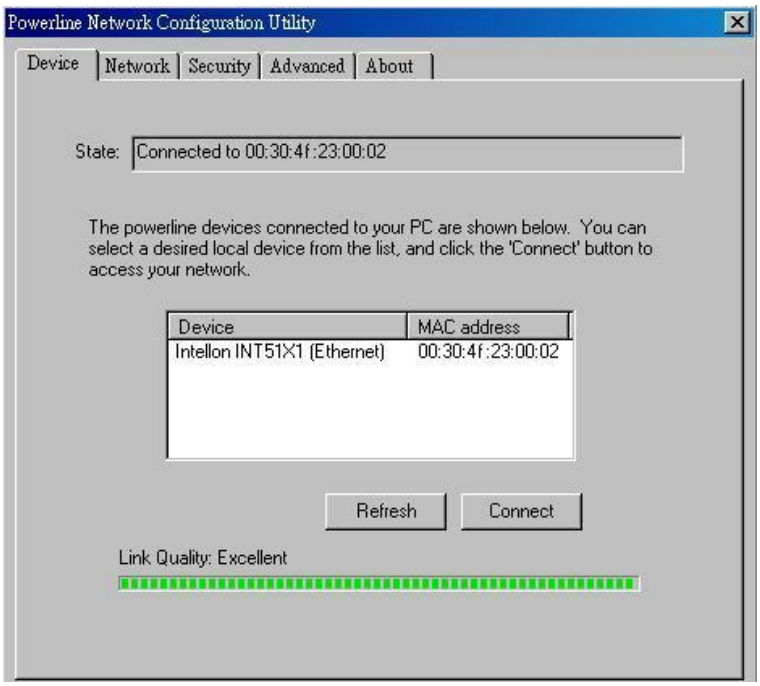
The Powerline Network Utility allows user to find devices on the powerline network, measure data rate and ensure privacy by setting a user defined network private password. The installation procedure for the Powerline Network utility will vary depending on which operating system you are using on your computer.

1. Insert the CD-ROM into the CD-ROM drive to initiate the autorun program. Once completed, a menu screen will appear.
2. Click on the "Powerline Network Utility" hyperlink to start the installation. If the menu screen is not shown, you can start the installation as follows.
   - Click on **Start Menu/ Run.**
   - Enter **"E:\Utility\setup.exe"** in the appeared box, where "E" is the letter of your CD-ROM drive.
   - Click on **"OK"** button.
3. The utility will be installed into your computer and a new icon

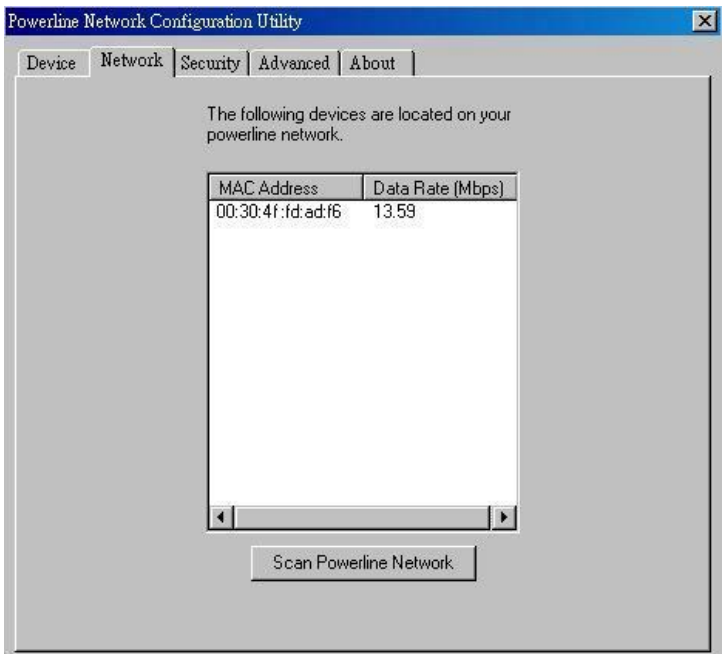
called "Powerline Network Configuration Utility" will appear on your desktop.

5.2 Use the Powerline Network Utility

1. Double click the **Powerline Network Configuration Utility** icon shown on your desktop. The Device tab shows the chipset and the MAC address of your Powerline device connected to your computer. If you have installed more than two Powerline devices, select the preferred one and click **Connect** to access your network. Click **Refresh** whenever you add or eliminate Powerline devices. The Link Quality depends on the site 's power circuit condition, power stability, etc.



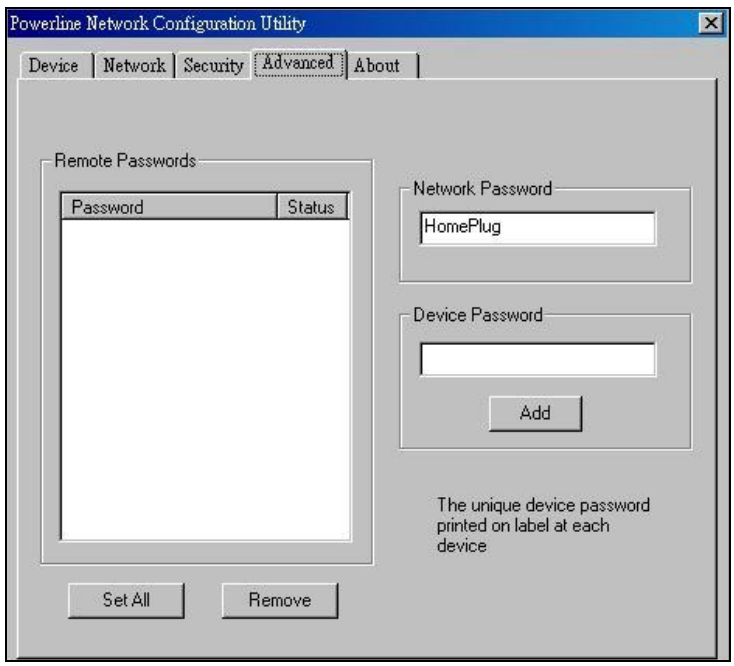
2. The Network tab shows all Powerline devices present on your network. Click **Scan Powerline Network** to update Powerline network.



3. The **Security** tab shows the default network password is **HomePlug**. Enter your own private network password if needed and click **Set Local**.

Powerline Network Configuration Utility
Device
Network
Security
Advanced
About
Enter your own private password in the Network Password box below. Press the Set Local button to set the local device password.
Note that you will need to setup each device on your powerline network with the same Network Password.
Network Password
HomePlug
Set Local
Restore Default

4. The **Advanced** tab allows you to add other remote device password. You don't need this password unless other devices set different network password with yours. Each device password is different and listed on the bottom case label stuck on each Powerline Adapter. Enter the device password (The format is xxxx-xxxx-xxxx-xxxx) and click **Add**. Click **Set All** to activate the new-added password and the status column will be shown OK.



5. Click OK to close the Utility program.

Appendix A
Troubleshooting

This chapter gives information about troubleshooting your PRT-301W. After each description, instructions are provided to help you diagnose and solve the issue.

LAN LED Not On
If the LAN LED does not light when the Ethernet connection is made, check the following:

- Be sure you are using the correct cable.

- Make sure that the Ethernet cable connections are secure at the Router and at the hub or workstation.

- Make sure that power is turned on to the connected hub or workstation.
- If you are connecting a LAN port of PRT-301W directly to the uplink (MDI) port of a hub, use the straight-through network cable.
- If you are connecting a LAN port of PRT-301W to a normal (MDI-X) hub port, use the crossover network cable.
- If you are connecting a WAN port of PRT-301W to a normal (MDI-X) hub port, use the straight-through cable.

Troubleshooting the ISP Connection

If your Router is unable to access the Internet, you should first determine whether the Router is able to obtain a WAN IP address from the ISP. Unless you have been assigned the static IP address, your Router must request an IP address from the ISP. You can determine whether the request was successful using the Browser interface.

To check the WAN IP address from the Browser interface:

1. Launch your Browser and select an external site such as www.yahoo.com
2. Access the Main Menu of the Router's configuration at http://192.168.1.1
3. Click on Monitor
4. Check that an IP address is shown for the WAN Port
5. If it is "NO" on active table, your Router has not obtained an IP address from your ISP.

If your Router is unable to obtain an ISP address from the ISP, the problem may be one of the following:

- Your Router may be set incorrectly the login name and password for PPPoE mode.

- Your ISP may check for your PC's Host Name. Assign the PC Host Name of your ISP account to the Router as System Name, or as Host Name in the browser-based Setup Wizard.

- Your ISP only allows one MAC address to connect to Internet, and may check for your PC's MAC address. Inform your ISP that you have bought a new network device, and ask them to use the Router's MAC address.

If your Router can obtain an IP address, but your PC is unable to load any web pages from the Internet:

- Your PC may not recognize any DNS server addresses.

A DNS server is a host on the Internet that translates Internet names (such as www addresses) to numeric IP addresses. Typically your ISP will provide the addresses of one or two DNS servers for your use. If you entered a DNS address during the Router's configuration at NAT mode, reboot your PC and verify the DNS address.

Alternatively, you may configure your PC manually with DNS addresses, as explained in your operating system documentation.

- Your PC may not have the Router configured as its TCP/IP gateway. If your PC obtains its information from the Router by DHCP, reboot the PC and verify the gateway address.

Testing the LAN Path to Your Router

You can ping the Router from your PC to verify that the LAN path to your Router is set up correctly. To ping the Router from a PC running Windows 95, Windows 98, or Windows NT:

- From the Windows toolbar, click on the Start button and select Run.

- In the field provided, type Ping followed by the IP address of the Router at the NAT mode, as in this example:

ping 192.168.1.1

- Click on OK.

You should see a message like this one:
Pinging < IP address > with 32 bytes of data
If the path is working, you see this message:
Reply from < IP address >: bytes=32 time=NN ms TTL=xxx
If the path is not working, you see this message:
Request timed out

If the path is not functioning correctly, you could have one of the following problems:

Wrong physical connections
-Make sure the Local LAN LED is on.
-Check that the corresponding Link LEDs are on for your network interface card and for the hub ports (if any) that are connected to your workstation and Router.

Wrong network configuration
- Verify that the Ethernet card driver software and TCP/IP software are both installed and configured on your PC or workstation.
- Verify that the IP address for your Router and your workstation are correct and that the addresses are on the same subnet.

Testing the Path from Your PC to a Remote Device

After verifying that the LAN path works correctly, test the path from your PC to a remote device:

From the Windows run menu, type PING -n 10 followed by the IP address of a remote device such as your ISP's DNS server. If the path is functioning correctly, replies as in the previous section are displayed.

If you do not receive replies:

Check that your PC has the IP address of your Router listed as the default gateway. If the IP configuration of your PC is assigned by DHCP, this information will not be visible in the control panel network utility. Go to the Run... window and run winipcfg. The IP address of the Router should appear as the Default Gateway.

- Check to see that the network address of your PC (the portion of the IP address specified by the subnet mask) is different from the network address of the remote device.

- Check console to verify the WAN status. If the menu indicates the WAN status as down, check that your ADSL line is connected and functioning.

- If your ISP assigned a host name to your PC, enter that host name as the Router name.

- Your ISP could be rejecting the Ethernet MAC addresses of all but one of your PCs. Most broadband ISPs restrict access by only allowing traffic from the MAC address of your Broadband Router, but some ISPs additionally restrict access to the MAC address of a single PC connected to that modem. If this is the case, you must configure to allow the Router to "borrow" the MAC address from the authorized PC.